ELECTRICALLY CONDUCTIVE SILVER PLATED COPPER COATING 3800C

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Detail : 3800C Electrically conductive silver plated copper coating aerosol
Application of the substance / the preparation: Surface Coating.
Relevant Identified uses of the substance or mixture and uses advised against: Surface Coating
Manufacturer / supplier:

Holland Shielding Systems B.V.
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2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification According to regulation (EC) No 1272/2008 or Directive 1999/45/EC Main Hazards	 Xn; Harmful R-63: Possible risk of harm to the unborn child  Xi; Irritant R36: Irritating to eyes  F+; Extremely flammable R12: Extremely flammable R67: Vapours may cause drowsiness and dizziness
Classification system is according latest editions Of the EU lists	The product has to be labelled due to the calculation procedure of the "general Classification guideline for preparations of the EU" in the latest valid version Warning! Pressurized container CAS 1330-20-7 xylene mix CAS 108-88-3 toluene CAS 7440-50-8 copper CAS 7440-22-4 silver CAS 100-41-4 ethylbenzene
Hazard pictograms	 GHS02 GHS05 GHS08
Signal word	Danger
Hazard- determining components of labelling	Isobutanol Xylene (mix) Toluene ethylbenzene
Hazard statements	H222-H229 extreamley flammable aerosol. Pressurised container: may burst if heated H315 causes skin irritation H318 causes serious eye damage H361d suspected of damaging the unborn child H412 harmful to aquatic life with long lasting effects H304 may be fatal if swallowed and enters airways
Precautionary statements	P301+P310 IF SWALLOWED: immediately call a POISON CENTER/doctor. P321 specific treatment (see on this label) P331 do NOT induce vomiting P305+P351+P338 IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P362+P364 take off contaminated clothing and wash it before reuse P405 store locked up P501 dispose of contents/container in accordance with local/regional/national/international regulations P410+P412 protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F

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3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Chemical characterisation: Mixtures

Description: Mixture of substances listed below with non-hazardous additions.

CAS: 115-10-6 EINECS: 204-065-8 Reg.nr.: 01-2119472128-37	Dimethyl ether  Flammable Gas 1, H220,  Press Gas C, H280	50-100%
CAS: 1330-20-7 EINECS: 215-535-7 Reg.nr.: 01-2119488216-32-xxxx	Xylene (mix)  Flam. Lq. 3, H226  STOT RE 2, H373: Asp. Tox. 1, H304:  Acute Tox. 4, H312: Acute Tox 4, H332: Skin irrit. 2, H315: Eye Irrit.2, H319; STOT SE 3, H335	2.5-10%
CAS: 141-78-6 EINECS: 205-500-4 Reg.nr.: 01-2119475103-46-xxxx	Ethyl Acetate  Flam. Lq. 3, H225;  Eye Irrit.2, H319; STOT SE 3, H336	2.5-10%
CAS: 108-88-3 EINECS: 203-625-9 Reg.nr.: 01-2119471310-51-xxxx	Toluene  Flam. Liq. 2, H225;  Repr. 2, H361d; STOT RE 2, H373; Asp. Tox. 1, H304;  Skin Irrit. 2, H315; STOT SE 3, H336; Aquatic Chronic 3, H412	25-50%
CAS: 78-83-1 EINECS 201-148-0 Reg.nr.: 01-2119484609-23-xxxx	Iso-butanol  Flam. Liq. 3 H226  Eye Dam. 1, H318  Skin Irrit. 2, H315; STOT SE 3, H335-H336	2.5-10%
CAS: 67-63-0 EINECS: 200-661-7 Reg.nr.: 01-2119457558-25-xxxx	Propan-2-ol  Flam. Liq. 2, H225;  Eye Irrit. 2, H319; STOT SE 3, H336	1-2.5%
CAS: 108-65-6 EINECS: 203-603-9 Reg.nr.: 01-211947579-29	2-methoxy-1-methylethyl acetate  Flam. Liq 3, H226	1-2.5%
CAS: 123-86-4 EINECS: 204-658-1 Reg.nr.: 01-2119485493-29-xxxx	Butyl ethanoate  Flam. Liq. 3, H226;  STOT SE, H336	2.5-10%
CAS: 7440-50-8 EINECS: 231-159-6	Copper Aquatic acute 1, H400: Aquatic Chronic 2, H411:  Acute Tox. 4, H302	2.5-10%
CAS: 100-41-4 EINECS: 202-849-4 Reg.nr.: 01-2119489370-35	Ethylbenzene  Flam. Liq. 2. H225;  STOT RE 2, H373; Asp. Tox.1, H304;  Acute Tx 4, H332	1-2.5%

Additional information: For wording of the listed risk phrases refer to section 16

4. FIRST AID MEASURES

4.1 Description of first aid measures

General information	Immediately remove nay clothing soiled by the product. Symptoms of poisoning may even occur after several hours; therefore, medical observation for at least 48 hours after the accident
Inhalation	Supply fresh air and call for a doctor. In case of unconsciousness place patient stably inside position for transportation
After skin contact	Immediately wash with water and soap and rinse thoroughly
After eye contact	Rinse opened eye for several minutes under running water
After swallowing	If symptoms persist consult doctor

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information avaible

4.3 indication of any immediate medical attention and special treatment needed
No further relevant information available

5. FIREFIGHTING MEASURES

5.1 Extinguishing Media
Suitable extinguishing agents:
CO2, powder or water spray. Fight larger fires with water Spray or alcohol resistant foam.

5.2 special hazards arising from the substance or mixture
No further relevant information avaible

5.3 advice for fire fighters
Do not use water with full jet. Wear full protective clothing and self contained breathing apparatus operating in the positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away

6.2 Environmental precautions
Do not allow product to entre drains, soil, waterways and sewers. Prevent further spillage if safe.

6.3 Methods and material for containment and cleaning up
Dispose contaminated material as waste according to
item 13. Ensure adequate ventilation

6.4 Reference to other sections
See section 7, 8, 13 for further information

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Ensure good ventilation/extraction at the workplace. Open and handle receptacle with care.
Further information about fire and explosion protection: Do not spray onto a naked flame or any incandescent material. Keep ignition sources away. Do not smoke. Protect against electrostatic charges. Pressurized containers protect from sunlight and do not expose to temperatures exceeding 50º C, i.e. electric lights. Do not pierce or burn, even after use.

7.2 Precautions for safe storage, including and incompatibilities
Keep receptacle tightly sealed and do not seal receptacle gas tight. Store in cool dry conditions and in well sealed receptacles. Protect from heat and direct sunlight

7.3 Specific end use(s)
No further relevant information available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters
8.1.1 Exposure Limit Values that require monitoring at the workplace

115-10-6 dimethyl ether WEL	Short term value: 958mg/m³, 500ppm Long term value: 766mg/m³, 400ppm
1330-20-7 Xylene (mix) WEL	Short term value: 441 mg/m³, 100ppm Long term value: 220 mg/m³, 50ppm Sk; BMGV
108-88-3 Toluene WEL	Short term value: 384 mg/m³, 100ppm Long term value: 191 mg/m³, 50ppm Sk
123-86-4 Butyl ethanoate WEL	Short term value: 966 mg/m³, 200ppm Long term value: 724 mg/m³, 150ppm

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67-64-1 Propan-2-one WEL	Short term value: 3620 mg/m³, 1500ppm Long term value: 1210 mg/m³, 500ppm
108-65-6 2-Methoxy-1-Methyethyl Acetate WEL	Short term value: 548 mg/m³, 100ppm Long term value: 274 mg/m³, 50ppm
141-78-6 Ethyl Acetate WEL	Short term value: 1468 mg/m³, 100ppm Long term value: 734 mg/m³, 50ppm
78-83-1 iso-butanol WEL	Short-term value: 231 mg/m³, 75 ppm Long-term value: 154 mg/m³ 50 ppm
100-41-4 ethylbenzene WEL	Short term value: 552mg/ m³, 125 ppm Long term value: 441mg/ m³, 100ppm
DNELS	
115-10-6 dimethyl ether Inhalative	DNEL 471 mg/m³ (con) 1894 mg/m³ (ind)
141-78-6 Ethyl Acetate Dermal Inhalative	DNEL 37mg/day (con) 63 mg/day (ind) DNEL 367 mg/ m³ (con) 734 mg/ m³ (ind)
1130-20-7 Xylene (mix) Dermal Inhalative	DNEL 108mg/day (con) 180 mg/day (ind) DNEL 14.8 mg/ m³ (con) 77 mg/ m³ (ind)
123-86-4 Butyl ethanoate Oral Dermal Inhalative	DNEL 2mg/day (con) DNEL 6 mg/day (con) 11 mg/day (ind) DNEL 35.7 mg/ m³ (con) 300 mg/ m³ (ind)
108-88-3 Toluene Oral Dermal Inhalative	DNEL 8.13 mg/day (con) DNEL 226 mg/day (con) 384 mg/day (ind) DNEL 56.4 mg/m³ (con) 192 mg/m³ (ind)
7440-50-8 copper Dermal Inhalative	DNEL 273 mg/day (con) 137 mg/day (ind) DNEL 20 mg/ m³ (con) 20 mg/ m³ (ind)
78-83-1 iso-butanol Oral Inhalative	DNEL 25mg/day (con) DNEL 55 mg/ m³ (con) 310 mg/ m³ (ind)
108-65-6 2-Methoxy-1-Methyethyl Acetate Oral Dermal Inhalative	DNEL 1.67 mg/day (con) DNEL 54.8 mg/day (con) 153.5 mg/day (ind) DNEL 200 mg/m³ (con) 275 mg/m³ (ind)
67-63-0 propan-2-ol Oral Dermal Inhalative	DNEL 26 mg/day (con) DNEL 319 mg/day (con) 888 mg/day (ind) DNEL 89 mg/m³ (con) 500 mg/m³ (ind)

PNECs
CAS No 1330-20-7 Xylene mixed isomers
Fresh water; 0.327 mg/l
Marine water 0.327 mg/l
Intermittent release 0.327 mg/l
STP; 6.58 mg/l
Sediment (freshwater) 12.46 mg/kg
Sediment (marine water) 12.46 mg/kg
Soil; 2.31 mg/kg
CAS No 123-86-4 Butyl Acetate
Freshwater: 0.18 mg/l
Marine water 0.018 mg/l
Fresh water sediment: 0.981 mg/kg
Marine sediment: 0.0981 mg/kg
Soil: 0.0903 mg/kg
STP (sewage-treatment plant): 35.6 mg/l
International use/release: 0.36 mg/l

8.1.2 Ingredients with biological limit values

1130-20-7 Xylene (mix) BMGV	650 mmol/mol creatinine Medium Urine Sampling time: post Shift Parameter: methyl hippuric acid

8.2 Exposure Controls

8.2.1 Appropriate engineering controls	To achieve adequate control, as required by the COSHH Regulations, extraction should be used to reduce exposure. Extraction should be properly maintained and in good working order. Please use health and safety guidelines to choose suitable extraction.
8.2.2 Individual Protection Measures	When spraying the product, us a respiratory protection device.
Respiratory Protection	When skin exposure may occur, advice should be sought from the glove supplier on appropriate types an usage times for this product
Protection of hands	 Protective Gloves The glove material has to be impermeable and resistant to the product/substance the preparation.
Material of Gloves	The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacture. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application
Eye Protection	 Tightly sealed goggles

9. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Form	Aerosol
Colour	Copper coloured
Odour	Characteristic
Odour Threshold	Not determined
pH Value	Not determined
Melting point/Melting range	Undetermined
Boiling point/Boiling point range	-24.9 ºC
Flash point	-42 ºC
Flammability (solid gaseous)	Not applicable
Ignition temperature	235 ºC
Decomposition temperature	Not determined
Self-igniting	Product is not self igniting
Danger of Explosion	Not determined
Explosion limits lower	3.0 Vol %
Higher	18.6 Vol %
Vapour Pressure at 20 ºC	5200 hPa
Density at 20 ºC	0.8 g/cm³
Relative density	Not determined
Vapour density	Not determined
Evaporation rate	Not applicable
Solubility in/Miscibility with water	NOT MISCIBLE
Partition coefficient (n-octanol/water)	Not determined
Viscosity: Dynamic	Not determined
Kinematic	Not determined
Organic solvents	88.1%
Water	0.1%
Solids content	12.8%

9.2 Other Information

Other information No further information available

10. STABILITY AND REACTIVITY

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10.1 Reactivity
No data available on this product

10.2 Chemical Stability
No data available on this product

10.3 Possibility of Hazardous reactions
No dangerous reactions know

10.4 Conditions to be avoided/Thermal decomposition
No decomposition if used according to specifications

10.5 Incompatible materials
No further relevant information available

10.6 Hazardous Decomposition Products
No dangerous decomposition products know

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity	LD/LC50 Values relevant for classification
108-88-3 toluene	Oral LD50 5580 mg/kg (rat) Dermal LD50 5000 mg/kg (rab) Inhalative LC50/4 h 20 mg/l (mus)
141-78-6 Ethyl Acetate	Oral LD50 4934 mg/kg (rat) Dermal LD50 20,000 mg/kg (rabt) Inhalative LC50/4 h 1600 mg/l (rat)
115-10-6 dimethyl ether	Inhalative LC50/4 h 164000 mg/l (rat)
1330-20-7 Xylene (mix)	Oral LD50 5000 mg/kg (rat) Dermal LD50 2000 mg/kg (rbt) Inhalative LC50/4 h 4300 mg/l (rat)
123-86-4 Butyl ethanoate	Oral LD50 10,760 mg/kg (rat) Dermal LD50 14,112 mg/kg (rabt) Inhalative LC50/4 h 23.4 mg/l (rat)
7440-50-8 copper	Oral LD50 > 2000 mg/kg (rat)
78-83-1 iso-butanol	Oral LD50 2000 mg/kg (rat) Dermal LD50 2000 mg/kg (rabt)
67-63-0 propan-2-ol	Oral LD50 5840 mg/kg (rat) Dermal LD50 13900 mg/kg (rbt) Inhalative LC50/4 h >25 mg/l (rat)
100-41-4 ethylbenzene	Oral LD50 3500 mg/kg (rat) Dermal LD50 17,800 mg/kg (rabt)
108-65-6 2-Methoxy-1-Methyethyl Acetate	Oral LD50 >5000 mg/kg (rat) Dermal LD50 5000 mg/kg (rbt) Inhalative LC50/4 h >10.8 mg/l (rat)

Skin Contact	Irritant to skin and mucous membranes
Eye Contact	No irritant effect
Sensitisation	No sensitizing effects know CMR effects (carcinogenetic, mutagenicity and toxicity for reproduction) Germ cell mutagenicity based on available data; the classification criteria are not met. Carcinogenicity suspected cause of cancer Reproductive toxicity based on available data; the classification is not met. STOT- single exposure based on available data, the classification criteria not met STOT – repeated exposure causes damage to organs through prolonged or repeated exposure. May cause damage to the hearing organs through prolonged or repeated exposure Aspiration hazard based on available data, the classification criteria are not met

11.2 Additional toxicological information
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparation as issued in the latest version: Irritant

12. ECOLOGICAL INFORMATION

12.1 Toxicity
Aquatic toxicity No further relevant information available

12.2 Persistence and degradability
No further relevant information available

12.3 Bioaccumulative potential
No further relevant information available

12.4 Mobility in soil
No further relevant information available

12.5 Ecotoxical effect
Harmful to fish

12.6 Additional ecological information
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water. Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground. Harmful to aquatic organisms

12.7 Results of PBT and vPvB assessment
Not applicable

12.7 Other adverse effects
No further relevant information available

13. DISPOSAL CONSIDERATIONS

General Information
Must not be disposed together with household garbage.
Do not allow product to reach sewage system

Disposal and Packaging
Disposal must be made according to official regulations

14. TRANSPORT INFORMATION

14.1 UN Number

ADR, IMDG,IATA	UN1950

14.2 UN Proper Shipping Name

ADR IMDG IATA	1950 Aerosols environmentally hazardous Aerosols Aerosols, flammable

14.3 Transport Hazard Class

ADR Class Label	 Flammable 2 5F Gases 2.1

14.4 Label

IMDG, IATA Class Label	 2.1 2.1

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14.5 Packing Group

ADR,IMDG,IATA	Void

14.6 Environmental hazard

Marine pollutant	No
Special precautions for user	Warning: Gases
Danger code (Kemler)	-
EMS Number	F-D, S-U
Storage code	SWI protected from sources of heat Sw22 for AEROSOLS with a maximum capacity of 1 litre Category A for AEROSOLS with a capacity of 1 litre Category B. For WASTE AEROSOLS: Category C, Clear of living quarters SG69 for AEROSOLS with a maximum capacity of 1 litre: segregation as for class 9. Stow "separated from" class 1 except for division 1.4. for AEROSOLS with a capacity above 1 litre: segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: segregation as for the appropriate subdivision of class 2

14.7 Transport Information

Transport in bulk according to Annex II Of MARPOL73/78 and the IBC Code	Not applicable
ADR	1L
Limited Quantities (LQ)	Code: E02
Excepted quantities (EQ)	Not permitted as excepted quantity
Transport category	2
Tunnel restriction code	D
IMDG	1L
Limited Quantities (LQ)	Code: E0
Excepted quantities (EQ)	Not permitted as excepted quantity
UN "Model Regulation"	UN 1950 AEROSOLS, 2.1, ENVIRONMENTALLY HAZARDOUS

15 REGULATORY INFORMATION

15.1 Safety, health and environment regulations/legislation specific for the substance or mixture

Directive 2012/18/EU
Named dangerous substances: ANNEX 1 none of the ingredients is listed
Seveso category P5c FLAMMABLE LIQUIDS
Qualifying quantity (tonnes) for the application of the lower- tier requirements 5,000t
Qualifying quantity (tonnes) for the application of upper – tier requirements 50,000 t
REGULATION (EC) No 1907/2006 ANNEX XVII conditions of restrictions 3
National regulations:
Technical Instructions (air):

Class	Share in %
III	5.3
NK	88.1

Water hazard class: Water hazard class 2 (self- assessment): hazardous for water.

15.2 Chemical Safety Assessment

A Chemical safety assessment has not been carried out

16. OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

ELECTRICALLY CONDUCTIVE SILVER PLATED COPPER COATING 3800C

Other Information

Relevant phrases	
H220	Extremely flammable gas
H225	Highly flammable liquid and vapour
H226	Flammable liquid and vapour
H280	Contains gas under pressure; may explode if heated
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer
H316d	Suspected of damaging the unborn child
H373	May cause damage to organs through prolonged or repeated exposure

Abbreviations and acronyms
RID: Reglement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organization
ADR: Accord europeen sur le transport des marchandises par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived no – effect level (REACH)
PNEC: Predicted no – effect level (REACH)
PBT: persistent, bioaccumulate and toxic
vPvB: very persistent and very bioaccumulate
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Flam Liq. 2: Flammable liquids, Hazard Category 2
Flam. Liq. 3 Flammable liquids Hazard Category 3
Acute Tox. 4: Acute Toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Skin Sens. 1: Sensitisation – Skin, Hazard Category 1
Carc. 2: Carcinogenicity, Hazard Category 2
STOT SE 3; Specific target organ toxicity- Single exposure, Hazard Category 3
STOT RE 1: Specific target organ toxicity- Repeated exposure, Hazard Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment – Chronic Hazard, Category 3
Repr. 2. Reproductive toxicity – category 2
Asp. Tox. 1 aspiration hazard – category 1

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